

# **Commonwealth Edison Company's Quarterly Smart Grid Test Bed Report**

**February 14, 2013**

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## Introduction

This report summarizes the test bed activities, customers, discoveries, and other information deemed mutually relevant from October 1, 2013, through December 31, 2013 as described in subsection (i) of Section 16-108.8 of the Public Utilities Act (“Act”).

## ComEd Quarterly Smart Grid Test Bed Report

During the fourth quarter of 2013, ComEd received no new Test Bed Applications for deployment in the Smart Grid Test Bed. However, ComEd continued working with Sentient Energy to develop a demonstration scope. A description of Sentient Energy’s technology and the current status of the demonstration are included below.

**Sentient Energy:** [www.sentient-energy.com](http://www.sentient-energy.com)

Develops a line monitoring device that captures critical operating characteristics and event data from multiple points on the distribution system. These monitoring locations are made up of sensors and embedded applications that gather data related to real-time operating current, conductor temperature and voltage characteristics. At the heart of this line monitor is a high-resolution waveform capture capability that detects faults and other network “anomalies”. All data is sent wirelessly back to the utility in near-real time. Data is used for real-time control as well as planning, engineering and power quality to enhance network reliability.

*Status:* ComEd and Sentient Energy are finalizing the detailed scope and desired outcomes for a Test Bed demonstration. The scope will include demonstrations of voltage and current sensing capabilities of Sentient Energy’s line sensors, as well as the ability of the sensors to interface with the wireless communications network ComEd is

currently deploying. Installation is expected by the 2<sup>nd</sup> quarter, pending availability of sample units from Sentient Energy for the demonstration.